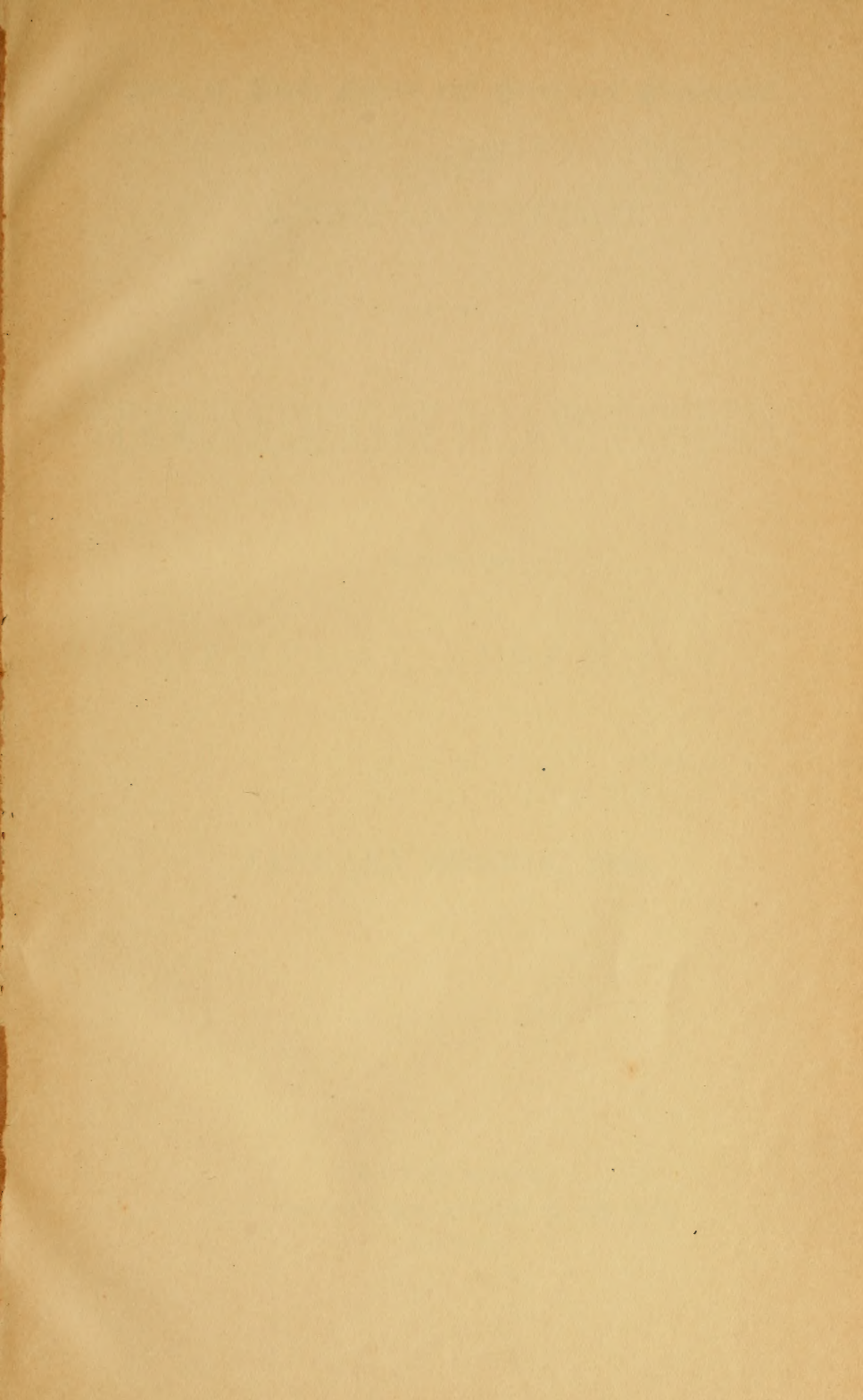


Nov. 6 1899

Newport Natural History
Society

From J. M. R. Lenthewick

NEWPORT
NATURAL HISTORY
SOCIETY



State of Rhode Island and Providence Plantations.

22

ANNUAL REPORT

OF THE

COMMISSIONERS OF INLAND FISHERIES,

MADE TO THE

GENERAL ASSEMBLY,

AT ITS

JANUARY SESSION, 1892.

PROVIDENCE:

E. L. FREEMAN & SON, STATE PRINTERS.

1892.

REPORT.

To the Honorable General Assembly of the State of Rhode Island and Providence Plantations at its January Session, 1892 :

The Commissioners of Inland Fisheries herewith present their annual report for the year 1891.

SHAD.

The Commissioners of Inland Fisheries received from Col. Marshall McDonald, United States Fish Commissioner, two million sixty thousand (2,060,000) shad fry May 4th, 1891. These were deposited in Palmer river, which is the only stream in the State adapted to them, not having insurmountable dams or other obstructions.

TROUT.

We have purchased forty thousand (40,000) trout eggs, which were hatched and the fry has been placed in various streams of the State. The trout fishing the past season has not been as good as last year, owing in part to excessive fishing last year, and lower state of water.

The Bay and coast fisheries the past season has in some respects been peculiar; all along the coast the blue-fish and small mackerel have been abundant, while in the bay, scup, tautog, flat-fish and small mackerel have been present in large numbers.

The herring and the bass have failed to appear in numbers. The menhaden fishing has been very light. The catch is indicated in the table of shipments as follows.

The following table shows the amount of fish and lobsters shipped from Newport by the Old Colony Steamboat and Railroad for each month of the year 1891 :

Month.	Fish.	Lobsters.
January	23 Barrels.	44 Barrels.
February.....	51 “	48 “
March.....	61 “	62 “
April.....	288 “	227 “
May.....	12,174 “	236 “
June.....	3,010 “	317 “
July	1,072 “	542 “
August.....	610 “	401 “
September.....	353 “	265 “
October....	268 “	24 “
November.....	100 “	5 “
December.....	22 “	33 “
<hr/>		
Total.....	18,032 “	2,204 “

Total of fish and lobsters shipped from Newport by the Old Colony lines :

1886.....	17,434 Barrels.
1887.....	17,491 “
1888.....	16,194 “
1889.....	21,353 “
1890.....	11,583 “
1891.....	20,236 “

For further statistics of the fisheries of Rhode Island we copy from the Statistical Review of the Coast Fisheries, published by United States Commission, 1891.

RHODE ISLAND.

The tables presented show many phases of the fisheries not similarly exhibited in the statistics of 1880; it is difficult therefore to institute comparisons in all cases. There has been a large decrease in persons employed, amounting to 26 per cent, and an increase of 73 per cent. in capital invested and 18 per cent. in the catch. This is due to the improvement in the vessels, especially those employed in menhaden fishing, in the menhaden factories, and in the pound-net and trap fisheries. There is not much difference in the value of menhaden vessels; in the aggregate fewer vessels are now employed, but these are of an improved type, and, with fewer men, perform the same work that was done by a larger fleet in 1880.

There has been a gratifying increase in the menhaden industry, the manufactured products of which in 1880 were valued at \$221,748, while in 1888 the amount was \$334,686. This is the most important fishery of the State, taking the value of the manufactured products as a basis, but is excelled by the oyster industry, if we consider only the amount paid to fishermen for their catch. With the exception of the menhaden industry, there is no important vessel fishery; the craft employed are generally small and engaged in shore or market fishing.

48. *Table of persons employed.*

How engaged.	1887.	1888.
On fishing vessels	364	400
On transporting vessels.....	14	17
On boats.....	915	875
On shore, in factories, etc.....	342	411
Total.....	1,635	1,703

49. *Table of apparatus and capital.*

Designation.	1887.		1888.	
	No.	Value.	No.	Value.
Vessels fishing*.....	55	\$171,400	64	\$194,150
Outfit.....		23,281		29,085
Vessels transporting†.....	7	2,550	9	3,225
Outfit.....		530		510
Boats.....	743	91,324	749	91,679
Apparatus of capture—vessel fisheries:				
Purse seines.....	17	10,950	17	10,800
Hand lines and trawl lines.....		1,750		1,555
Gill nets.....	3	30	9	90
Harpoons.....	20	300	32	480
Pots.....	175	350	225	450
Dredges, rakes, etc.....	72	919	75	975
Apparatus of capture—shore fisheries:				
Haul seines.....	42	2,900	42	2,900
Hand lines and trawl lines.....		180		179
Trap nets and pound nets.....	160	72,400	166	79,870
Fyke nets.....	354	2,570	374	2,670
Gill nets.....	99	6,270	96	6,090
Dredges, tongs, etc.....	999	7,483	493	2,950
Pots.....	5,600	6,798	5,450	6,723
Miscellaneous apparatus.....		12		10
Shore property.....		348,264		353,485
Cash capital.....		242,500		235,000
Total.....		\$992,761		\$1,022,876

* Tonnage in 1887, 1,221.21; in 1888, 1,349.60.

† Tonnage in 1887, 105.30; in 1888, 131.91.

50. *Table of products.*

Species.	1887.		1888.	
	Pounds.	Value.	Pounds.	Value.
Alewives.....	682,800	\$10,250	666,800	\$10,215
Alewives, salted.....	325,000	6,500	415,000	8,500
Alewives, smoked.....	130,000	2,250	150,000	2,450
Bluefish.....	321,650	22,305	388,850	23,140
Butterfish.....	266,000	9,320	283,000	9,810
Cod.....	204,394	6,499	253,250	7,653
Cod, salted.....	82,558	3,754	53,140	2,009
Eels.....	318,000	16,950	321,600	17,332
Flounders.....	426,300	11,406	558,000	13,290
Haddock.....	87,450	2,468	86,460	2,607
Haddock, salted.....	4,464	147	4,704	118
Kingfish.....	8,000	320	8,500	298
Mackerel.....	268,063	18,545	237,100	20,007
Mackerel, salted.....	500,200	28,541	303,800	23,624
Menhaden.....	34,035,000	85,088	78,269,800	195,277
Perch.....	61,000	2,440	60,000	2,400
Pollock, salted.....	50,960	1,752	50,400	1,800
Scup.....	3,030,033	75,545	4,207,700	84,480
Sea bass.....	497,800	13,090	512,400	15,504
Shad.....	16,700	1,247	17,400	1,213
Smelts.....	55,000	2,875	61,500	3,135
Squeteague.....	268,000	10,450	275,000	11,540
Striped bass.....	61,200	5,324	85,500	7,048
Swordfish.....	101,452	4,430	217,063	9,718
Tautog.....	182,000	7,200	187,450	7,608
Miscellaneous fish.....	83,545	1,289	122,361	1,677
Refuse fish.....	860,000	1,090	1,396,000	1,756
Lobsters.....	570,039	27,128	588,500	28,047
Crabs.....	4,800	1,200	4,000	1,000
Oysters.....	1,358,210	261,026	1,324,785	252,601
Clams (<i>Mya arenaria</i>).....	258,250	25,030	308,250	30,030
Quohaugs (<i>Venus mercenaria</i>).....	153,720	15,699	264,232	28,075
Scallops.....	11,284	2,337	4,942	1,130
Total.....	45,284,872	\$683,495	91,687,487	825,092

51. *Summary by customs districts of the vessel fisheries of Rhode Island in 1887 and 1888.*

Designation.	Newport.		Bristol and Warren.		Providence.		Total.	
	1887.	1888.	1887.	1888.	1887.	1888.	1887.	1888.
Number and nationality of fishermen:								
Americans.....	300	330	10	14	48	56	358	400
All others.....					6		6	
Total.....	300	330	10	14	54	56	364	400
Number and nationality of crews on transports:								
Americans.....	14	17					14	17
Number of vessels fishing.....	35	40	5	6	15	18	55	64
Number of vessels transporting.....	7	9					7	9
Net tonnage of vessels fishing.....	1,045.71	1,089.63	43.25	48.52	132.25	211.45	1,221.21	1,349.60
Net tonnage of vessels transporting.....	105.30	131.91					105.30	131.91
Value of vessels fishing..	\$155,100	\$166,350	\$2,900	\$5,200	\$13,400	\$22,600	\$171,400	\$194,150
Value of vessels transporting.....	2,550	3,225					2,550	3,225
Value of outfit, gear, provisions, fuel, etc., of vessels fishing.....	34,555	37,785	475	1,225	2,550	4,425	37,580	43,435
Value of provisions, fuel, etc., of vessels transporting.....	530	510					530	510
Value of catch of vessels fishing.....	128,407	239,922	3,060	7,870	42,656	45,271	174,123	293,063
Value of products transported.....	12,400	13,840					12,400	13,840

52. Table showing by apparatus and species the yield of the vessel fisheries of Rhode Island in 1887 and 1888.

Apparatus and species.	1887.		1888.	
	Pounds.	Value.	Pounds.	Value.
Hand lines and trawl lines :				
Blue fish.....	12,150	\$709	42,200	\$1,962
Cod.....	133,894	4,329	180,250	5,408
Cod, salted.....	66,878	3,054	38,580	1,359
Haddock....	80,950	2,313	80,460	2,462
Haddock, salted	4,464	147	4,704	118
Mackerel.....	43,063	5,545	29,300	2,637
Mackerel, salted.....	324,200	17,981	167,800	13,424
Tautog.....			3,950	158
Total.....	665,599	\$32,078	547,244	\$27,528
Seines :				
Mackerel.....			4,000	360
Menhaden.....	34,035,000	85,088	78,269,800	195,277
Miscellaneous fish.....	7,045	141	4,361	97
Total.....	34,042,045	\$85,229	78,278,161	\$195,734
Gill nets :				
Bluefish.....			650	30
Mackerel.....			4,000	360
Scup.....	2,833	85	1,700	50
Total.....	2,833	\$85	6,350	\$440
Harpoons :				
Swordfish.....	101,452	\$4,430	217,063	\$9,718
Pots :				
Eels			4,100	\$249
Lobsters.....	20,039	1,128	38,500	2,047
Total.....	20,039	\$1,128	42,600	\$2,203
Dredges and rakes :				
Oysters.....	239,710	\$45,887	281,288	\$53,645
Quohaugs.....	33,720	2,949	24,238	2,575
Scallops.....	11,284	2,337	4,942	1,130
Total.....	284,714	\$51,173	310,468	\$57,350
Grand total.....	35,116,682	\$174,123	79,401,886	\$293,063

53. Table showing by fisheries and species the yield of vessel fisheries of
Rhode Island in 1888.

Fisheries and species.	Pounds.	Value.	Fisheries and species.	Pounds.	Value.
Shore:			Mackerel:		
Bluefish.....	42,850	\$1,992	Mackerel.....	37,300	\$3,357
Cod.....	180,250	5,408	Mackerel, salted....	167,800	13,424
Cod, salted.....	38,580	1,359	Miscellaneous fish ..	4,361	97
Eels.....	4,100	246			
Haddock.....	80,460	2,462	Total.....	209,461	\$16,878
Haddock, salted.	4,704	118			
Scup.....	1,700	50	Mollusk:		
Tautog.....	3,950	158	Oysters.....	281,288	\$53,645
			Quohaugs... ..	24,238	2,575
Total.....	356,594	\$11,793	Scallops.....	4,942	1,180
Swordfish.....	217,063	\$9,718	Total.....	310,468	\$57,350
Menhaden.....	78,269,800	195,277			
Lobster.....	38,500	2,047	Grand total.....	79,401,886	\$293,063

54. Table showing the number of vessels engaged in each fishery in Rhode Island
in 1888, together with their tonnage, value, and number of crew.

Fishery.	Number of vessels engaged.	Net ton- nage.	Value of vessels.	Number of fisher- men.*
Mackerel.....	30	375.95	\$43,500	119
Menhaden.....	12	770.00	136,000	225
Shore	21	243.91	20,800	80
Swordfish	16	210.89	25,250	60
Crustacean.....	3	17.55	1,600	9
Mollusk.....	22	191.36	24,300	53

* All American citizens.

55. Table showing by apparatus and species the yield of the shore fisheries of Rhode Island in 1887 and 1888, exclusive of the shellfish and crustacean fisheries.

Apparatus.	Species.	1887.		1888.	
		Pounds.	Value.	Pounds.	Value.
Pound nets.....	Alewives.....	681,00	\$10,230	664,300	\$10,170
	Alewives, salted....	10,000	200	15,600	325
	Alewives, smoked.	80,000	1,250	95,000	1,552
	Bluefish.....	53,500	3,076	65,800	3,948
	Butterfish.....	262,000	9,240	277,700	9,704
	Eels.....	75,000	3,000	111,000	5,994
	Flounders....	313,300	8,566	408,000	9,545
	Kingfish.....	8,000	320	8,500	298
	Scup.....	3,027,200	75,460	4,206,000	84,430
	Sea bass	485,300	12,640	496,300	14,976
	Shad.....	7,500	562	8,400	588
	Smelt.....	40,000	2,000	42,200	2,153
	Squeteague.....	252,000	9,660	255,850	10,692
	Striped bass.....	50,000	4,250	73,000	6,032
	Tautog.....	25,000	950	52,000	2,070
	Miscellaneous fish*.....	76,500	1,148	118,000	1,580
	Refuse fish†.....	860,000	1,090	1,396,000	1,756
	Total	6,307,100	\$143,642	8,293,650	\$165,813
Gill nets.....	Bluefish.....	218,500	\$16,170	230,700	\$13,842
	Butterfish.....	1,000	20	1,800	36
	Squeteague.....	9,000	410	10,650	373
	Total.....	228,500	\$16,600	243,150	\$14,251
Fyke nets	Flounders.....	93,000	\$2,410	125,800	\$3,145
Pots.....	Eels.....	198,000	12,250	161,000	8,635
Haul seines.....	Alewives.....	1,000	20	2,500	45

* Miscellaneous fish includes the cheaper grades of food-fishes, as flatfish, flounders, scup, squeteague, etc., which have been taken in small quantities and shipped without regard to quantities of different species; also, species of infrequent occurrence not sufficiently important to separate.

† Principally sculpin and menhaden used in the production of oil and fertilizer, and a few other species unfit for market because of their small size or deterioration in quality.

55. Table showing by apparatus and species the yield, &c.—Continued.

Apparatus.	Species.	1887.		1888.	
		Pounds.	Value.	Pounds.	Value.
Haul seines.....	Alewives, salted.....	315,000	\$6,300	399,400	\$8,175
	Alewives, smoked... ..	50,000	1,000	55,000	898
	Bluefish.....	2,500	250	4,000	400
	Butterfish.....	3,000	60	3,500	70
	Eels.....	45,000	1,700	45,500	2,457
	Flounders.....	6,000	120	8,000	200
	Perch or cunners.....	61,000	2,440	60,000	2,400
	Sea bass.....	500	20	600	24
	Shad.....	9,200	685	9,000	625
	Smelt.....	15,000	875	19,300	982
	Squeteague.....	7,000	380	8,500	475
	Striped bass.....	11,200	1,074	12,500	1,016
	Tautog.....	5,000	250	6,250	312
	Total.....	531,400	\$15,174	634,050	\$18,079
Lines.....	Bluefish.....	35,000	\$2,100	45,500	\$2,958
	Cod.....	70,500	2,170	73,000	2,245
	Cod, salted.....	15,680	700	14,560	650
	Flounders.....	14,000	310	16,200	400
	Haddock.....	6,500	155	6,000	145
	Mackerel.....	225,000	15,000	199,800	16,650
	Mackerel, salted.....	176,000	10,560	136,000	10,200
	Pollock.....	50,960	1,752	50,400	1,800
	Sea bass.....	12,000	430	15,500	504
	Tautog.....	152,000	6,000	125,250	5,068
	Total.....	757,640	\$39,177	682,210	\$40,620
	Grand total.....	8,115,640	\$229,253	10,139,860	\$250,543

56. *Table showing the extent of the menhaden industry of Rhode Island.*

Designation..	1887.	1888.
Number of factories in operation.....	3	3
Value of factories.....	\$193,000	\$193,000
Amount of cash capital.....	\$69,000	\$70,000
Number of shoresmen employed.....	177	246
Number of fishermen employed.....	222	225
Number of steam vessels employed.....	11	11
Net tonnage.....	766.88	747.56
Value.....	\$126,000	\$135,000
Value of outfit.....	\$30,000	\$29,000
Number of sailing vessels employed in fishing.....	1	1
Net tonnage.....	27.50	22.44
Value.....	\$1,500	\$1,000
Value of outfit.....	\$1,000	\$700
Number of sailing vessels employed as "carryaways".....	3	5
Net tonnage.....	42.32	64.08
Value....	\$1,400	\$1,825
Value of outfit.....	\$180	\$265
Number of menhaden handled.....	60,901,670	127,169,670
Value to fishermen.....	\$73,072	\$155,004
Number of gallons of oil made.....	538,623	762,360
Value as sold.....	\$129,539	168,418
Number of tons of scrap produced.....	3,810	8,551
Value as sold.....	\$81,010	\$166,268

BLUE-FISH

came upon our coast the middle of June and remained until the last of October. Their abundance in the waters from Monhegan Island, Me., to the capes of the Delaware has been simply wonderful. Captain Church writes us "that he could have caught more this season with a purse net than he did of menhaden, and of the latter he took about 30,000 barrels. That it made little difference where you went, they were there in large schools." He adds: "Yet some people say they

are all caught up. I wish they were, for they are the terror of nearly all other kinds of fish."

BASS.

There has been a marked falling off in the number of these king of fish to the sportsman from last year. Their failure this year has been attributed to different causes, by some to the dumping of garbage near the mouth of the bay. The drift of the lighter portion of this over the fishing ground could hardly be supposed to effect the change, since it is dumped not less than two miles from land and distributed over a large area of surface. The amount of garbage rarely exceeds 150 barrels and probably not over one-third, or fifty barrels, of this floats upon the surface. Of this a small part only ever reaches our shores; some of this is devoured by birds, and we hear of fish being taken with vegetable matter in them; a large pollock was found with a quantity of celery in its stomach. We cannot see that the floating of this small amount of refuse of vegetable matter over the fishing ground can be more deleterious to the fishing than the same quantity of seaweed. That the garbage attracts sharks and the sharks keep off other fish seems more plausible. But the presence of sharks in the water this season in very large numbers is attributed to the unusually warm weather by some of our closest observers, and to this cause we are inclined. While we doubt not the garbage does attract these fish in its locality we hardly think it possible to draw them from distant localities to the extent observed this season.

MACKEREL

have been in or near our coast all the season, but did not take the hook freely; very few were taken except small mackerel, which are reported as very plentiful all along the coast.

[From the Halifax, N. S., Morning Herald.]

LETTER FROM W. H. ROGERS.

COLUMBIA, Pa., June 23, 1891.

The large increase in the catch of mackerel on the Nova Scotia coast this spring is particularly gratifying to the writer, as it doubtless is to the fisher-

men interested, and particularly so as the failure on the American coast is still more marked than in former years. The reason for this state of things is easily understood by those who have given the subject any thought or intelligent consideration. Scientific investigation both in Europe and America have demonstrated that :

1st. All the mackerel caught by man amounts to but a drop in the bucket to what are destroyed by natural causes and devoured by their natural enemies, both in the sea and upon its surface.

2d. Mackerel are controlled in their movements by temperature and food influences, and not by modes of fishing, sawdust, PURSE SEINES, etc. The matter of temperature is of course beyond the reach of human laws, while that of food supply is not. It is quite obvious to those who will give the subject any intelligent thought that the almost total destruction of the alewife fishery of Nova Scotia up to 1882-3 had well nigh destroyed a very important item in the food supply of the coast fishery in all its branches, as has been the case in other countries. Knowing this I addressed myself to the work of improving fishways and opening the streams for the ascent of anadromous fishes, with what results the public know, and the departmental reports of the catch of alewives during the past seven or eight years prove, and the increasing catch of mackerel bear witness to the correctness of the views I have maintained, and which are recorded in every published report from year to year.

Having done this for my native province in the face of the most fierce and bitter opposition of certain public men who live for nothing but self and have no use for anybody or any improvement unless they contribute to the inflation of their purse or vanity, I am now spending the few remaining years of my life in opening the streams of the United States, and am sending shad, alewives, salmon and other fish over doors and up such rivers as the Hudson, Delaware, Susquehanna, Raritan and other great streams, on some of which scores of thousands of dollars had been wasted on such silly devices as the Hawkins abortion, by men who knew no more of the matter than he does. I note what was said in your columns recently as to the salmon caught in Wilmot's trap at the Rhino dam. I am quite familiar with the conditions existing there, and know what occurred as well as if I had been on the spot, and will assert that no salmon ever did or ever will pass through a Hawkins fishway under a six-foot head or upwards, or alewives under a four-foot head or upwards, and that every dollar spent upon it of either public or private funds will be wasted. The history of a few years will prove the soundness of these views, as it has already done in the sawdust and other important matters in relation to the interests of the fisheries. But then "Experts (?) " are now employed.

W. H. ROGERS.

TAUTOG

have been plenty on the fishing grounds in the bay, but not so plenty on the ledges outside until late in the season. About the middle of October, when they had gone out of the rivers, they were so plenty that one fisherman caught from 200 to 250 in number in about four hours fishing. This lasted for about three weeks.

SCUP

the past season in their approach to our coast came more freely into the Bay. While the outer traps caught much less, those inside caught enough more to swell the shipments beyond that of any previous year of which we have record, excepting that of 1889. They remained in our waters all the season and furnished abundance of fishing. With the schools that came here in May were large numbers of small fish, and they caused the fishermen much trouble to separate them. This was done by large mesh netting that would allow the small ones to pass out.

It was thought that from 1,000 barrels they would save but about 50 barrels of large scup.

It was a great sight to see the millions of these little fellows turned from the traps every morning for near three weeks.

This is reported as the experience of all the traps from Point Judith to Seaconnett.

Surely the presence of these small scup in such immense numbers this year would justify the theory that it will be followed next year by largely increased numbers of the larger ones, and there can be little question of the soundness of this reasoning.

But an unusual depletion of their numbers from natural agencies that are at work, unseen and unknown, while they are absent from us, may, as it often has, disappoint us.

HERRING.

These fish that are the earliest comers of all anadromous fishes

failed to appear but in very small numbers in our waters, yet they are said to have been very abundant in Buzzard Bay and Vineyard Sound.

THE ANCHOVY

Have been very abundant along the coast; they furnish food for many other fish.

MENHADEN.

The catch has been the poorest for many years, the catch of the whole fleet hardly exceeded the catch of one steamer in 1889. This is owing partly to the restrictive laws in some of the States. The total catch is about 225,000 barrels.

State of Rhode Island, in account with Commissioners of Inland Fisheries:

1891.	DR.	
Jan. 1.	To paid for brook trout eggs, hatching and raising.....	\$84 60
	“ Expressage.....	4 80
May 4.	“ Expense on 2,060,000 Shad Fry	24 00
Dec. 31.	“ Expenses of Commissioners	44 56
	“ Paper, stamps and stationery.....	8 50
		<hr/>
		\$166 46
1891.	CR.	
May 16.	By cash from State Treasurer.....	\$65 56
	“ Balance due Commissioners.....	100 90
		<hr/>
		\$166 46

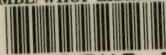
J. M. K. SOUTHWICK,
HENRY T. ROOT,
WILLIAM P. MORTON,

Commissioners of Inland Fisheries.





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